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ABSTRACT

Impressions of people are resistant to change. Information contradictory to an initial impression has relatively little impact on the impression and is particularly likely to be recalled. Possible resolutions on this paradox include: (1) the recalled information and the impression of the person are independent of each other; (2) people may link incongruent information to information they have that fits their initial impression, and the additional thought given to incongruent items reinforces the initial impression; and (3) people generally attribute behavior which is inconsistent with their impressions to situational causes. To examine more directly the amount of attention given to congruent and incongruent information as a function of causal attribution subjects were given information about the behaviors of a target person which was congruent with their intial impression, except for one item, which was either congruent or incongruent and was attributed to a situational or dispositional cause. The behavioral information was presented on a screen controlled by a microcomputer. Subjects controlled the length of viewing time for each item, and the time was recorded by the computer. Although the correlation between recall and looking time was significant, looking time accounted for less than 4 percent of the variance in recall. The study provides support for all three of the possible resolutions of the paradox of person perception. (WAS)

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Attributions, Attention, and Person Memory:

Processing Congruent and Incongruent Information

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For the last few years, my students and I have been trying to resolve an apparent paradox of person perception. The paradox is this: Impressions of people (and social beliefs in general) are resistant to change. Information that contradicts an initial impression of a person has relatively little impact on the impression (Schneider, Hastorf, & Ellsworth, 1979). At the same time, research on memory for social information indicates that information that contradicts an impression of another person is particularly likely to be recalled. (Hastie & Kumar, 1979; Hastie, 1980; Srull, 1981). If information that violates our impression of another is more likely to be recalled than information that confirms an impression, then why are impressions resistant to change?

There are at least three ways this paradox might be resolved. The first is that the information recalled about a person and the impression one has of him or her may be independent. If the impression is formed or is adjusted at the time the information is first encountered, then the information on which the impression is based may subsequently be forgotten, while the impression is retained. Thus, the impression would not necesarily be related to, nor based on, the information that is later recalled. There is some evidence for the independence of impressions and recall in the impression formation literature (Anderson & Hubert, 1963; Dreben, Fiske & Hastie, 1979).

The second possible resolution is that in the process of integrating incongruent information into an impression, people may link the incongruent information to the information they have that fits their initial impression. Thus, the additional thought given to incongruent items may actually strengthen the existing links to congruent information in memory, and reinforce the initial impression. This possibility was suggested by Thom Srull (Note 1), who has found in his own research (Srull, 1981) that the

inclusion of incongruent information in an impression formation task actually increases the number of congruent items that are recalled.

The third possible solution, the one that we have focussed on in our research, stems from the finding that people generally attribute behavior that is inconsistent with their impression of a person to situational causes (Bell, Wicklund, Manko & Larkin, 1976; Deaux & Emswiller, 1974; Feldman-Summers & Kiesler, 1974; Heyden & Mischel, 1976; Kulik, 1983). Behavior that is attributed to situational causes is irrelevant to an impression of what the person is like. Thus, when incongruent behavior can be attributed to situational causes, as it typically is, the behavior may be recalled but it should have less impact on impressions.

In a study that Darlene Hannah, Renee Weber and I conducted (Crocker, Hannah, & Weber, 1983), subjects formed an initial impression of a target person, John, and then learned about several of John's behaviors. All of the information subjects received about the target person was congruent or neutral with respect to the initial impression, with the exception of one target item that was either congruent or incongruent with the impression and was attributed to either a situational or a dispositional cause. The incongruent item had an advantage in recall over the congruent item only when the target item was attributed to dispositional causes. When the target item was attributed to a situational cause, the congruent and incongruent items were equally likely to be recalled. The data on impressions showed a similar pattern of results. The incongruent item had significantly more impact on impressions of the target person when it was attributed to a dispositional cause than when it was attributed to a situational cause. A subsequent experiment demonstrated that subjects do, in fact, rate situational explanations as more likely than disposional explanations for incongruent

behavior. Thus, the studies suggest that the apparent contradiction between the finding that information that violates an initial impression has relatively little impact, and yet is particularly likely to be recalled can be resolved when the causal attributions that people make for incongruent behavior are considered. The surprising aspect of these findings was the effect that causal attributions had on subjects' recall of the incongruent items.

The effects of causal attributions on memory for congruent and incongruent information may be explained in at least two ways. Fiske (1980) suggested that information that is informative about a person receives more attention, and more weight in impressions. In the Crocker et al study, incongruent items should be more informative than congruent items when they are attributed to dispositional causes. Consequently, incongruent, dispositionally-attributed items may receive more attention, and be better recalled (c.f., Taylor & Fiske, 1978). A somewhat different explanation was suggested by Hastie and Kumar (1979). According to them, incongruent behaviors spend more time in working memory because they must be explained and integrated into the impression. While in working memory, incongruent items are linked to other items also in working memory. Consequently, incongruent items are linked to more other items than congruent items. Because the probability of retrieving an item depends on the number of pathways or links to that item, incongruent items are particularly likely to be found in a search of memory. According to this view, attention is required for incongruent items to be recalled, but the crucial issue is the number of links formed to other items in memory.

John Vitkus and I conducted an experiment to examine more directly the amount of attention congruent and incongruent information receives as a function of the causal attribution given to the item. The experiment

replicated the procedure of Crocker et al with a few modifications. Subjects received information about the behaviors of a target person which was congruent with their initial impression of him with the exception of one item. The target item was either congruent or incongruent with the initial impression and was attributed to a dispositional or a situational cause. In a departure from the procedure of Crocker et al, the behavioral information was presented on a CRT screen controlled by a microcomputer, and subjects controlled the length of time each item appeared on the screen. This viewing time, which was the operationalization of amount of attention, was recorded by the computer, unbeknownst to the subjects. In addition to viewing time, we measured recall for the information, and subjects' impressions of the target person.

For the purpose of saving time, I will not go into the details of the procedure of the study although a complete description is availabe in an article-length manuscript, for anyone who is interested (Crocker & Vitkus, Note 2).

Results

Attention. The looking time data were analyzed by dividing the amount of time each subject viewed the target item by that subject's average viewing time for the other behaviors. Analysis of variance revealed a highly significant Congruence X Attribution interaction ($F(1,96) = 9.13$, $p < .004$). This interaction is depicted in the first slide. Incongruent target items were viewed longer than congruent target items only when they were attributed to dispositional causes ($p < .001$). When the target item was attributed to a situational cause, the congruent items were viewed nonsignificantly longer than the incongruent items ($F < 1$).

Recall. The recall data replicated our earlier findings. As the middle panel of the second slide shows, incongruent target items had an advantage in

recall of congruent target items only when the items were attributed to dispositional rather than situational causes.

Recall for congruent items. We also analyzed the total number of items congruent with the initital impression that subjects recalled, as a function of the congruence and attribution provided for the target item. Significantly more of the other congruent items were recalled if the target item was incongruent, than if it was congruent ($F(1,151) = 4.84$, $p < .03$). Thus with only a single incongruent item, we have replicated Srull's (1981) finding that incongruent items increase the likelihood of recalling congruent items.

Attention-recall correlation. The relationship between looking time and recall was analyzed by computing the correlation between whether or not the target item was recalled, and the looking time ratio for the target item. The correlation was $r(175) = .18$, $p < .05$.

Impressions. Impressions of the target person were assessed by having subjects rate him on a number of traits. Analysis of variance revealed a Congruence X Attribution interaction ($F(1,96) = 7.18$, $p < .01$), which indicated that when the target item was followed by a dispositional attribution, ratings were higher if the target item was congruent (99.35) than if it was incongruent (90.17). However, when the target item was followed by a situational attribution, ratings were similar when the target item was congruent (98.75) and when it was incongruent (100.70).

Attention-trait rating correlations. The relationship between attention and impressions was examined by computing correlations between looking time and trait ratings. Looking time was unrelated to impressions in the congruent dispositional attribution condition ($r(43) = .04$, n.s.). The correlation was also nonsignificant when the target item was incongruent, and attributed to a situational cause ($r(43) = .07$, n.s.). In these cases, one could argue that the time required to comprehend the target item should be unrelated to its

impact on subsequent impressions. A stronger, although still nonsignificant, correlation between looking time and impressions was obtained when the target item was congruent, and attributed to situational causes ($r(43) = .15$, n.s.). The longer these items were looked at, the more like the initial impression the target person was rated. Most surprising was the correlation obtained for the incongruent, dispositionally attributed target item ($r(43) = .36$, $p < .05$). The longer these items were looked at, the more like the initial impression the target person was rated.

Recall-trait rating correlations. The relationship between recall and impressions for situationally and dispositionally attributed items was also calculated. Again, correlations were computed separately for congruent and incongruent target items, because they should have opposite effects on impressions. Subjects who recalled the congruent target item rated the target person more like the initial impression than subjects who did not, both for dispositionally ($r(43) = .15$, n.s.) and situationally ($r(43) = .32$, $p < .05$) attributed items. Surprisingly, recalling the incongruent item was also positively related to rating the target person more like the initial impression, both for dispositionally ($r(43) = .25$, $p < .10$) and situationally ($r(43) = .23$, $p < .10$) attributed items.

Discussion

What accounts for the effects of causal attributions on recall for congruent and incongruent behavior? Although the correlation between recall and looking time was significant, looking time accounts for less than 4% of the variance in the recall data. Thus, although the pattern of results for the looking time data is similar to the pattern for the recall data, looking time itself does not appear to strongly mediate the recall results. However, the data for looking time and recall are consistent with the predictions of

Hastie (1980; Hastie & Kumar, 1979) and Srull (1981). According to their model, attention is less important than the number of links formed to other items as a determinant of recall. The amount of attention an item receives need not be highly correlated to the number of links formed to other items. The analysis of the number of congruent items subjects recalled, however, is only partially consistent with this explanation. When the target item was incongruent, subjects remembered more non-target congruent items than when it was congruent, regardless of how the target item was explained. Thus, we have no evidence in this study that the incongruent item is linked to more congruent items when it is dispositionally explained than when it is situationally explained, as we would expect from the data on recall of the target item.

One of the more interesting findings of the study is the relationship between attention and impressions, which showed an unexpected pattern for the incongruent, dispositionally attributed item. The longer subjects looked at this item, the more they rated the target person as like the initial impression. We can only speculate about what subjects were thinking as they looked at the target item, but apparently the longer subjects looked at this item the more likely they were to discount it. This pattern of results suggests that the relationship between attention and weight in impressions is not as straightforward as Fiske (1980) previously suggested. Although Fiske's looking time data fit the pattern of her weighting data when the data were collapsed across subjects, Fiske provides no evidence that those subjects who looked longer at an item also gave it more weight. Similarly, in our data, the results of analysis of variance show very similar patterns for looking time, recall, and impressions, but correlational analyses indicate that within conditions longer looking times are not always related to an item having more impact on impressions. These results suggest that the information that one

attends to will not always be over represented in judgments (c.f., McArthur, 1981; Taylor & Fiske, 1978). Under some circumstances, greater attention to information can lead to less impact on impressions.

The correlations between recall and impressions also failed to show the expected pattern. For congruent items, the relationship between recall and impressions was stronger for the situationally attributed item than for the dispositionally attributed item. For incongruent items, both those attributed to the situation and those attributed to dispositional causes, recalling the item was related to less impression change (i.e., impressions more like the initial impression). The impressions are not simply derived from subjects' recall of the target item.

This study provides support for all three of the possible resolutions of the paradox of person perception that we started out with. Impressions of others resist change, even though information that is incongruent with an impression is particularly likely to be recalled, because recall for an incongruent item and the impression one forms are not necessarily related; because the presence of incongruent information makes information that is congruent with an impression even more likely to be recalled, and because the causal attributions that subjects generate for behavior that is incongruent with an impression both makes that behavior less likely to be recalled, and limits its impact on impressions.

References Notes

1. Srull, T. Personal communication, April, 1983.

2. Crocker, J., & Vitkus, J. Attention, attribution, and recall: The effects of congruent and incongruent information on impressions. Northwestern University. Under editorial review, March 1983.

References

Anderson, N.H., & Hubert, S. Effects of concomitant verbal recall on order effects in personality impression formation. Journal of Verbal Learning and Verbal Behavior, 1963, 2, 379-391.

Bell, L. G., Wicklund, R. A., Manko, G., & Larkin, C. When unexpected behavior is attributed to the environment. Journal of Research in Personality, 1976, 41, 258-290.

Crocker, J., Hannah, D., & Weber, R. Person memory and causal attributions. Journal of Personality and Social Psychology, 1983, 44, 55-66.

Deaux, K., & Emswiller, T. Explanations for successful performance on sex-linked tasks: What is skill for the male is luck for the female. Journal of Personality and Social Psychology, 1974, 29, 80-85.

Dreben, E.K., Fiske, S.T., & Hastie, R. The independence of evaluative and item information: Impression and recall order effects in behavior-based impression formation. Journal of Personality and Social Psychology, 1979, 37, 1758-1768.

Feldman-Summers, S., & Kiesler, S. B. Those who are number two try harder: The effect of sex on explanations of causality. Journal of Personality and Social Psychology, 1974, 30, 846-855.

Fiske, S. T. Attention and weight in person perception: The impact of negative and extreme behavior. Journal of Personality and Social Psychology, 1980, 38, 889-906.

Hastie, R. Memory for behavioral information that confirms or contradicts a personality impression. In R. Hastie et al (Eds.) Person memory: The cognitive basis of social perception. Hillsdale, N.J.: Erlbaum, 1980.

Hastie, R., & Kumar, P. A. Person memory: Personality traits as organizing principles in memory for behaviors. Journal of Personality and Social Psychology, 1979, 37, 27-38.

Hayden, T., & Mischel, W. Maintaining trait consistency in the resolution of behavioral inconsistency: The wolf in sheep's clothing? Journal of Personality, 1976, 13, 141-154.

Kulik, J. A. Confirmatory explanation bias and the selective perception of situational context information. Journal of Personality and Social Psychology, in press.

McArthur, L.Z. What grabs you? The role of attention in impression formation and causal attribution. In E.T. Higgins, P. Herman, and M. Zanna (Eds.). Social Cognition: The Ontario Symposium, Vol. 1. Hillsdale, N.J.: Erlbaum, 1981.

Schneider, D.J., Hastorf, A.H., & Ellsworth, P. Person perception. Reading, Mass.: Addison-Wesley, 1979.

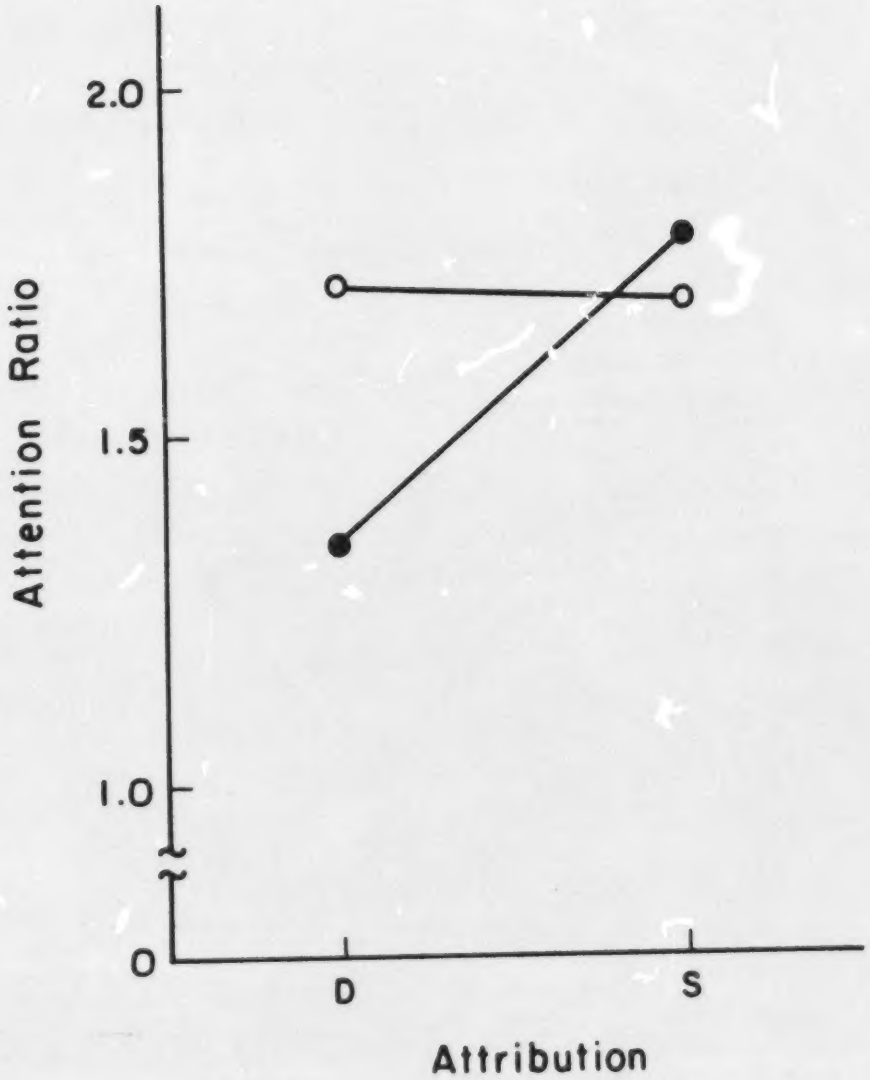
Srull, T. K. Person memory: Some tests of associative storage and retrieval processes. Journal of Experimental Psychology: Human Learning and Memory, 1981, 7, 440-463.

Taylor, S.E., & Fiske, S. T. Salience, attention, and attribution: Top of the head phenomena. In L. Berkowitz (Ed.) Advances in experimental social psychology, Vol. II. New York: Academic, 1978.

Figure Captions

1. Attention ratio (viewing time for target item divided by average viewing time for other items) as a function of congruence (filled circles = congruent, open circles = incongruent) and the attribution provided for the item (D = dispositional, S = situational).

2. Probability that the target item was recalled as a function of congruence (filled circles = congruent, open circles = incongruent) the attribution provided for the item (D = dispositional, S = situational), and the order of the dependent measures (recall task preceding impression task, following impression task, or following anagrams task).


2.0
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Attention Ratio
D
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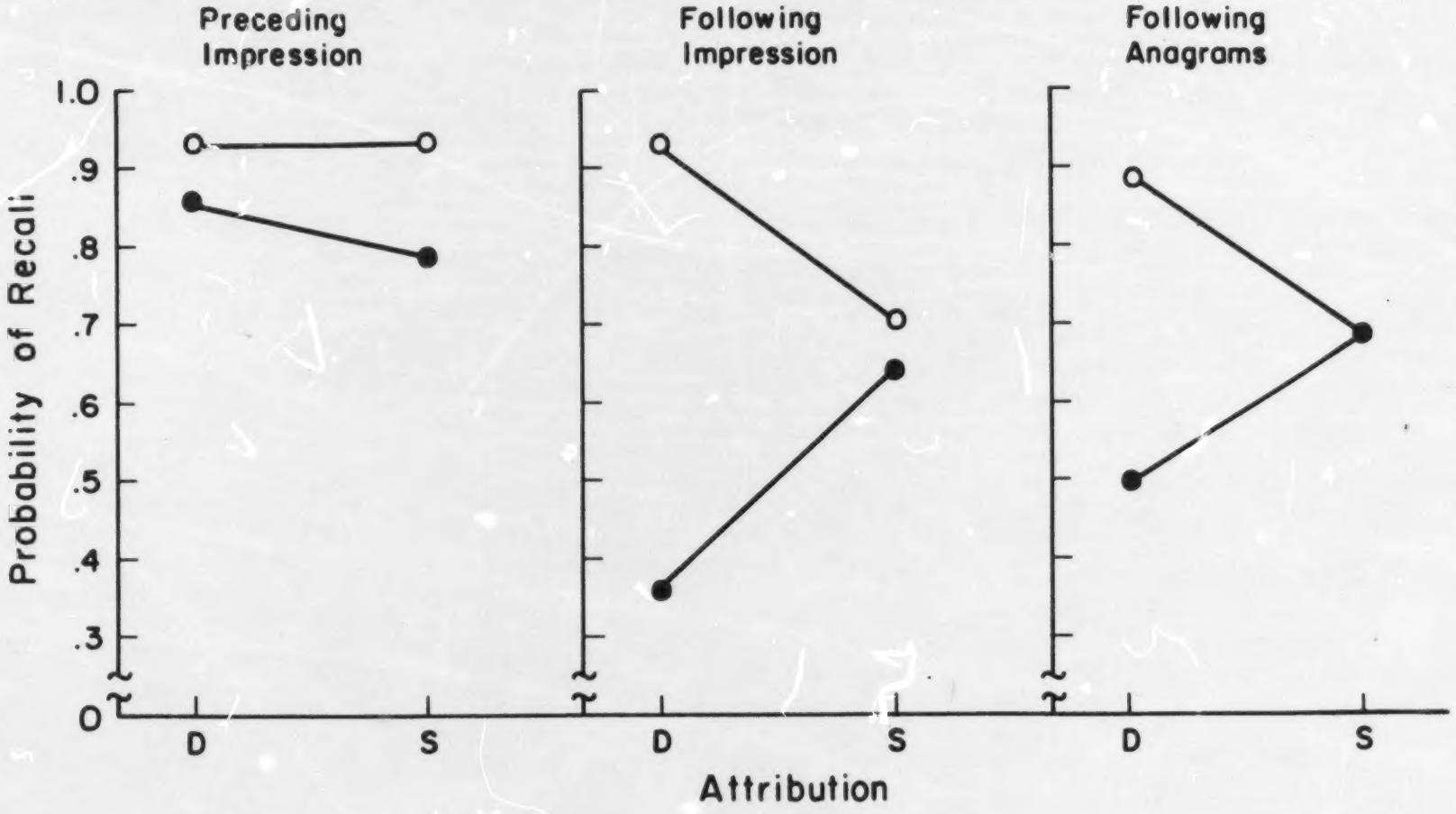
Preceding Impression
Following Impression
Following Anagrams
Probability of Recall
1.0
.9
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.6
.5
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0
D
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D
S
D
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Attribution